REMARKS/ARGUMENTS

In view of the above amendments and remarks, Applicants respectfully request reconsideration and allowance of the claims now in the case.

Claims 10-13, 19-34, 40-41 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected system.

Claims 1-7 and 9 had been rejected under 35 USC 102(b) as being anticipated by Khandkar, et al. U.S. patent number 5,763,114. However, independent claims 1 has been amended to recite "the reaction vessel comprises a plurality of parallel substrates each of the substrates having a first and second surface, and an endothermic reaction catalyst overlying the first surface, and an exothermic reaction catalyst overlying the second surface". Khandkar, et al. '114 fails to disclose a device with a plurality of such substrates.

Independent claim 3 recites "a reaction vessel including a plurality of endothermic reaction sections, and a plurality of heat transfer devices . . . and wherein each endothermic reaction section comprises a substrate shared by an adjacent heat transfer device:" Khandkar et al does not suggest a plurality of endothermic and heat transfer devices wherein each endothermic chamber shares a substrate with a heat transfer device.

Claims 14-18 had been rejected under 35 USC Section 102(e) as being anticipated by Edlund, et al. U.S. patent number 5,997,594. However, Applicants have amended independent claim 14 to recite "a reaction vessel integrating an exothermic reaction and an endothermic reaction, the reaction vessel including a plurality of parallel substrates each of the substrates having a first surface and a second surface, and an endothermic reaction catalyst overlying the first surface, and an exothermic reaction catalyst overlying the second surface". Edlund, et al. '594 does not disclose such a system.

Independent claim 17 has been amended to recite "an integrated exothermic and endothermic reaction vessel having a plurality of exothermic reaction chambers and a plurality of endothermic reaction chambers and a substrate separating one of the exothermic reaction chambers from one of the endothermic reaction chambers". Edlund, et al. '594 does not disclose such a system.

Independent claim 18 has been amended to recite "an integrated chemical combustion and fuel reformation vessel having a plurality of chemical combustion chambers and a plurality of fuel reforming chambers and a substrate separating an adjacent chemical combustion chamber from an adjacent reformation chamber". Edlund, et al. '594 does not disclose such a system.

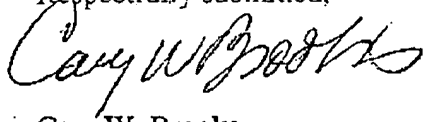
Claims 35-39 had been rejection under 35 USC 102(e) as being anticipated by Matsuda, et al. U.S. patent number 6,472,092. However, Applicants have amended independent claim 35 to recite "and wherein each endothermic reaction section includes a substrate shared by an adjacent heat transfer device". Independent claim 36 has been amended to recite "and wherein each endothermic reaction section comprises a substrate shared by an adjacent exothermic reaction section". Matsuda, et al. '092 fails to disclose such a system.

Applicant filed a Petition for a one-month extension of time to file this amendment on January 24, 2005.

Applicant believes that this amendment now complies with 37 CFR 1.121 by including the withdrawn claims 10-13, 19-34, and 40-41 in their entirety, correcting the status of claim 39 as (Currently Amended), and starting the Remarks on a new page.

In view of the above amendments and remarks, Applicants respectfully request reconsideration and allowance of the claims now in the case.

Respectfully submitted,



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